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KNOWLEDGE AND PERCEPTION

To maintain that we accumulate knowledge about a great variety of things that discovery and observation provide us with would seem a thesis sufficiently commonplace. It was the burden, nevertheless, of a recent article which I believed to have a certain pertinence to current perplexities.[1] To say that the subject-matter of knowledge of existence is revealed by perception is only to say that there is a subject-matter about which such knowledge may, under favorable conditions, be accumulated. The purpose of the article referred to was to claim that the subject-matter of existential knowledge must be provided by perception, and that the knowledge relation is one that occurs subsequent to perception, being a relation within what I ventured to call the existential universe of discourse. As the subject-matter of all existential discussion must, if I am right, belong to the class of discovered things, things known and things unknown do not differ from each other in the matter of *percipi*. A thing which has no place in the universe of discourse is not unknown in any logical sense. Accordingly, to treat the problem of defining knowledge as a problem of perception is, to say the least, an abuse of language,[2] for something that we have come upon may be an object of total ignorance. In fact it might be said that we are continually seeking to convert objects of ignorance into objects of knowledge. Before the deciphering of the Rosetta stone, Egyptian hieroglyphics could hardly be called objects of "knowledge" in any reasonable sense; but they are no longer the objects of ignorance that they formerly were: which is to say that they were objects of perception long before they were objects of knowledge. Knowledge of electricity is something which the electrician has got because he knows how certain things in the existential universe of discourse

[1] "The Existential Universe of Discourse," this JOURNAL, Vol. VI., p. 175.

[2] It is not claimed that the stricter usage of the word "knowledge" here advocated will, of itself, solve any problems. The epistemological problem of perception takes for granted the subject matter of empirical knowledge, and has to do with the interpretation of that subject matter. I have already argued that such an effort at interpretation is logically vicious.

affect one another. An object of ignorance would be one, not that we failed to discover, but one which bore no significant relation to any other member of its universe of discourse. Such an object would be an object of perception merely, and thereby, not an object of knowledge because not a term in any cognitive relation.

In the previous article much emphasis was put on distinguishing what I there called the immediacy and the causality aspects of things. I wish now to try to indicate the relation which these two aspects bear to one another. I must resort to the terminology of the preceding discussion.

I

If we replace the formula for sodium chloride by its more analytic equivalent intended to distinguish immediacy and causality we have $I_{Na}C_{Na} + I_{Cl}C_{Cl}$ produce salt. As the formula describes the determinate cooperation of causal factors, it is evident that the sign + connects Na and Cl, not in virtue of their immediacy, but in virtue of their causality. This can be made more evident to the eye by writing the formula as follows:

$$\frac{I_{Na}}{C_{Na}} + \frac{I_{Cl}}{C_{Cl}} \text{ produce salt.}$$

What now is the relation of I_{Na} to C_{Na}? It must not be forgotten that C_{Na} is not something *überhaupt,* but an instance of a particular causal efficacy operating under determinate conditions. The empirical relation of I to C should be evident to any one who admits that a blind man would not make the best assistant in a laboratory. A mutilated power of perception would interfere with the success of experiments and demonstrations. One who is going to use sulphuric acid must be able to tell that chemical from other chemicals. Salt and sugar resemble each other in one respect but not in another, and trouble has sometimes resulted from omitting the simple test of perception to learn which was which. If a particular immediacy did not serve to identify a particular causality there could be no science of the empirical world where causality was in question. And where the immediacy of one thing is very much like that of another, mistakes are frequent, and sometimes tragic. Immediacy is the sign of causality, but what causality is predicted by a given immediacy must be empirically found out. The chemist is the man who has learned to read a certain group of signs and to take advantage of them. It is a pleasure to acknowledge an obligation to Hobbes. He says: "A mark, therefore, is a *sensible object* which a man erecteth voluntarily to himself, to the end to *remember* thereby somewhat past, when the same object is objected to his sense

again: as men that have passed a rock at sea, set up some mark thereby to remember their former danger and avoid it."[3] So we might say that immediacy is a sensible aspect of a thing which, under the conditions of human experience, operates as a sign of whatever causality has been discovered to go along with it. If immediacy did not "mean" causality there could be no such thing as a science of nature. A critic might, however, reply: "To be sure, the immediacy of a thing is a sign of whatever causality the thing has been discovered to have. It may, however, be the sign of a great deal of causality as yet undiscovered. How can we say that the thing has been tried in all possible combinations?" Such a comment would express a relapse into the very point of view which appears to the present writer logically illegitimate. Undiscovered causality is something not within the existential universe of discourse. Within that universe immediacy has no relation to unobserved causality, for it can have no relation to a term devoid of content. If, then, we recognize that in situations where there is an exercise of causality, things combine to generate results because of their causality characteristics, and that the results are unaffected by the immediacy of the factors, but that immediacy, after experience has learned its lesson, is the sign of what may be expected if certain other familiar cases of immediacy are brought into conjunction, is not the real meaning of Hume's analysis of the causal relation more evident? "No object ever discovers by the qualities which appear to the senses either the causes which produced it or the effects which will arise from it; nor can our reason, unassisted by experience, ever draw an inference concerning real existence and matter of fact."[4] Hume's analysis recognizes that there is nothing about I_{Na} and I_{Cl} to enable us to predict in advance of experience how C_{Na} and C_{Cl} will operate. It will not be maintained, I suppose, that the explosiveness of gunpowder, the adhesive power of cement, the various utility of iron, is identical with the present "appearance" of any of these things. But immediacy, *after experience,* does enable us to tell cement from gunpowder. And that seems to be all that Hume was trying to say about causality.

II

A large part of the capital of "epistemology," indeed its initial motive, has been the supposed difficulty of distinguishing between immediacy and possible illusion. If any case of immediacy can be either hallucination or normal perception, how shall we tell by any *a priori* definition which a given case of immediacy shall be? It is

[3] "Human Nature," chapter V.

[4] "Inquiry," Section IV.

a problem of distinguishing between a real and a counterfeit, and this problem occurs often enough in practical affairs. In the world of flux and method, we test the sign function of immediacy. Dr. Johnson did so when he kicked the stone. The stone was an affair not merely of present sense-qualities, but of consequences to be arrived at in a particular way, and which might be expected by anybody familiar with stones. It is sometimes said that the difference between illusion and fact is that the latter presents us with "existence" while the former does not. Such an illusion is a case of pure immediacy. The fact comprises this same immediacy plus something else called "existence." If the letter E stand for existence, illusion and fact will be represented by I and I + E respectively. What now is the criterion for determining whether or not I is married to E? What are the tests for E? If experience can produce no information out of her store, there can be no test, for there will be no way of knowing what I alone empirically lacks, and hence no possibility of testing for it. What I alone empirically lacks is nothing on the side of immediacy, but it is the causality of which that immediacy is normally a sign. Such a case of illusion is synonymous with causal emptiness. The question, Have we or have we not here a case of existence? is the question, Does the immediacy here observed function as a sign of determinate consequences?

III

The aspects represented by I and C are both genuine aspects of the things that make up the empirical world. That is only to say that the empirical world is characterized by time and process. Metaphysicians have, it is true, not yet ceased to imagine a reality in which the calm of eternal self-identity leaves no place for the genesis of consequences. The theological conception of a changeless divine will survives in the metaphysical notion of a changeless absolute. But in the less exalted regions where empirical verification is possible and where methods are tested by facts, a complex future is generated by a complex present; and it is precisely the relation of present to future which C is intended here to represent. Of course, when the future arrives it will present itself in terms of immediacy, but it will include not merely that, but the conditions out of which its future must be generated, and of which that present immediacy is a sign for those who have learned to read it. Yet if immediacy is never worth appreciating on its own account, there can be no intrinsic values anywhere. Both I and C, present and future, are real aspects of experience and we can be interested in either one by itself. It sounds quite natural to ask, "Do you know

the Sistine Madonna, or the coloring of Turner, or the style of Tennyson?'' The question means, have you a direct and immediate acquaintance with these things? Have you appreciated their immediacy and do you preserve something of the impression? Thus the epistemologist frequently doubts whether you ''know'' the table or the inkstand. He does not doubt for a moment that you know it is a table or an inkstand, *i. e.*, that you know how to apply some of its causality. Such an epistemologist evidently uses the word knowledge in a sense that can not include the knowlege of the engineer, the geologist, the historian, the navigator, or the man of affairs. It is, of course, merely a question of terminology, but it is, in philosophy, worth some trouble to use one word to mean one thing, and when the word knowledge has come to mean two things we should consider which meaning we shall retain. There is no excuse for giving the word knowledge one meaning in science and another in metaphysics. What the imagined epistemologist really questions is not the range of our knowledge, but the authority of our perceptions. The word ''perception'' is a good word. When we mean perception let us say perception. Then we can use the word knowledge consistently to designate such things as the knowledge of the chemist, the physician, and the astronomer.

Those writers who have most systematically cultivated epistemology of the classic type have begun by taking the objective world in the relation of perception, but not in a normal and empirical relation.[5] They have described the world in terms of immediacy and formulated a ''representative'' theory of knowledge. To do so, however, is to leave out of account just the factors which signify the genesis of the future, that is, the factors with which that knowledge that is humanly most important is primarily concerned. Such a description can give no picture of a world in which anybody could do anything, or one thing affect another. To use again the formula

$$\begin{matrix} I_{Na} \\ C_{Na} \end{matrix} + \begin{matrix} I_{Cl} \\ C_{Cl} \end{matrix} \text{ produce salt.}$$

what the ''representative'' theory accomplishes is to eliminate C_{Na} and C_{Cl} as distinct aspects of sodium and chlorine. With them goes the relation of causal cooperation, leaving I_{Na} and I_{Cl} each standing alone by itself. The existence of I_{Na} and I_{Cl} is, of course, synonymous with perception, but the relation which provided the content of the chemist's knowledge has been lost. If we would do justice to the ''representative theory'' we should speak of a representative theory of perception, but not of a representative theory of knowledge. To define the problem of knowledge as the

[5] ''The Existential Universe of Discourse,'' this JOURNAL, p. 181.

problem of a representative, or copying, function in which the mind or consciousness mirrors its objects, is to make the chemistry of carbon irrelevant to the knowledge of carbon, and to forget, apparently, that the knowledge of nature is something to be accumulated, transmitted, and used. Knowledge of nature is skill in reading the signs of nature, and a point of view which is unable to treat immediacy as the sign of causality can provide no basis for a theory of knowledge.

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THE PHENOMENA OF PERIPHERAL VISION AS AFFECTED BY CHROMATIC AND ACHROMATIC ADAPTATION, WITH SPECIAL REFERENCE TO THE AFTER-IMAGE[1]

IN a recent article entitled "On the After-images of Subliminally Colored Stimuli,"[2] Professor Titchener and Mr. Pyle discuss certain after-images reported by Miss Thompson, Miss Gordon, and myself in a series of articles in the *Psychological Review*.[3]

The exact conditions under which these after-images can be obtained, as well as the correlation between them and certain related phenomena, have only recently been worked out by us and the results are as yet not published. It seems unnecessary here to discuss Professor Titchener's article in detail, since his experimental conditions differed sufficiently from ours to explain his failure to verify our results. The main variations occurred in the conditions of achromatic adaptation, in the degree of eccentricity at which the stimuli were exposed, and in the method of projecting the after-image.

One point raised by Professor Titchener, which must be discussed before we go on to our new data, is that of the variability of results at or near the outer color limits.

The method of experimentation employed in all recent zonal determinations is that of exploring the peripheral retina point by point, with a stationary stimulus and fixation and a considerable

[1] Given at the Baltimore meeting of the American Psychological Association, December, 1908.

[2] E. B. Titchener and W. H. Pyle, *Proceedings of the American Philosophical Society*, Vol. XLVII., No. 189, 1908, pp. 366–384.

[3] *Psychological Review*, Vol. XII., 1905, pp. 386–425; Vol. XIV., 1907, pp. 122–167; Vol. XV., 1908, pp. 25–43. A monograph giving a complete statement of our results and conclusions is at present in press. This brief statement is called forth by Professor Titchener's criticism. It should be stated that the conditions referred to were given, to a certain extent, in our earlier papers. See *Psychological Review*, XIV., 1907, pp. 129–130; XV., 1908, pp. 32–33.

interval between stimuli. Professor Titchener criticizes our results, obtained by this method, because they show certain irregularities at the outer color limits. That is, at a given fixation point beyond a given degree of eccentricity, a given stimulus does not give an invariable response.

The results[4] which Professor Titchener uses as negative evidence against us, are a set obtained for him by Professor Baird, of the University of Illinois. A study of Baird's results shows exactly the same sort of irregularity as that found in our results. For example, in the experiment to determine the limits for red with observer *B*, out of three trials with red at 68 degrees, the color was seen once as red, once as orange and once as yellow—yet 68 degrees is taken as the limit for red. Moreover, this same red was seen as yellow from 82 to 74 degrees, as orange from 72 to 70 degrees, and as red at 68 degrees in one series of tests, and in another set of tests with the same observer, was seen as gray from 80 to 70 degrees, as yellowish from 68 to 66 degrees, and as red first at 64 degrees. Thus there is a difference of 14 degrees between the points at which the stimulus is first seen as yellow in the two cases. Since Baird's results, as well as our own, show this irregularity at the outer limits, we venture to suggest that the reactions of the more peripheral portions of the retina are somewhat variable, even under carefully controlled conditions. The question is, however, one that can be settled only by an extended investigation, in which a large number of results are taken with each separate color at each of the various peripheral points. If such a series could be obtained under absolutely constant conditions of chromatic and achromatic adaptation, the results would either be entirely regular—*i. e.*, invariably the same at a given degree of eccentricity—or would, presumably, show variation in one of the two following ways: either the curve representing the number of correct judgments at each peripheral point along a given meridian would fall gradually from the point at which the color was invariably recognized, through the point at which the color was recognized in only 50 per cent. of the total number of tests, to the point at which the color was never recognized, or else the variability would be so irregular that there would be no such thing as an absolutely fixed limit for the color. In the former case the limit would be determined according to the method of liminal values, in the latter case we could only conclude that the retinal functions are variable from time to time at the more peripheral portions of the retina. We hope, in the near future, to be able to obtain a sufficiently large number of readings with a few of the standard colors to settle the question, at least in so far as these colors are concerned.

[4] *Op. cit.*, p. 378.

Professor Titchener has suggested that the after-images which followed unperceived stimuli in our work are due to chromatic adaptation. Our reasons for not accepting this explanation of our results have already been given in an earlier paper.[5] They are, in brief, as follows: Although the brightness and color stimuli were given in irregular order so that the observer had no clue to the nature of the stimulus, the after-image was invariably the characteristic one for the immediately preceding stimulus, and black, white, and gray were never seen as colors or followed by colored after-images. Moreover, all our work has gone to show that the after-images in question are observed under only one particular set of achromatic conditions, to be described in the following paragraphs, although there is an equal chance for chromatic adaptation to be effective throughout the entire investigation.

In general the changes which occur as the color is moved from the center to the periphery of the visual field, have been described as consisting in a tendency on the part of all colors (*Urfarben* excepted) to appear yellow or blue in the outer color zone, hence the designation of this region of the retina as the blue-yellow zone. Most of the observations on which these conclusions are based have been obtained either in the dark room, or a dark or gray background in medium illumination. Our results with the darker backgrounds agree with those already described, but under other conditions of illumination and background we have obtained very different results. Briefly, these results can be described as follows. The limits for all the colors except red and green are narrower when the colors are darkened by contrast with a white background. The most striking results (for the stimulus color) are those which show the effect of induced brightness on the color tone of red, orange, and yellow stimuli. Details can not be given here, but we can describe the situation briefly by saying that it is possible by varying sufficiently the brightness of red, orange, or yellow stimuli, to cause these colors to go through a characteristic series of changes—to wit, each of these colors can be made to appear as either of the others at almost any point on the periphery (from about 60 degrees out), and, under proper achromatic conditions, can be made to appear red at points near the outer color limits. To see orange or yellow as red it is necessary to observe them on a brightly illuminated white background, so that the colors are darkened by contrast with the background. To see red as orange or yellow it is necessary to observe it on a darker background.

Fully as striking a series of changes can be observed by projecting the after-images for blue or blue-green peripheral stimuli on

[5] This JOURNAL, Vol. III., p. 352.

screens of different brightness values. The after-image for either of these colors is yellow on a white screen, yellow or orange on a gray screen, and orange or pure red on a black screen. The red is reported, in all cases as particularly saturated.

Darkening a green stimulus by contrast with a light background, tends to emphasize the green component of the stimulus, though the effect is much less marked than in the case of red, orange, or yellow stimuli. Moreover, pure yellow is seen as red or orange when darkened in this way, rather than as green. The after-images for red, orange, and more especially for violet, show a slightly greater tendency to appear greenish when projected on a dark than on a light background, though with no background was the effect as pronounced as in the case of the after-images for blue and green-blue. Moreover, the after-image for blue, projected on the darker backgrounds, was always red or orange rather than green.

All these results seem to show that particular brightness conditions tend to emphasize particular colors, that all colors except red and green are decreased in saturation and recognized at a lesser degree of eccentricity on a dark than on a light background, but that even red and green (whether stimulus or after-image colors) appear more saturated and are seen at a greater degree of eccentricity when viewed against backgrounds having certain brightness values.

The achromatic conditions have a direct effect on the relative frequency with which after-images follow colored stimuli at the periphery. Peripheral after-images are entirely lacking when the observations are made on a wholly darkened field (*i. e.*, in the dark room), and even in good illumination the percentage of after-images was smaller and their saturation less on the dark than on the light background. Thus there seems to be a definite correlation between achromatic conditions and the after-image. In dark adaptation the after-image is practically absent; as the illumination is increased the percentage of after-images to stimuli gradually increases and the saturation of the after-image becomes more nearly equal to that of the stimulus; finally, on the white background in full illumination, the after-image is almost invariably as saturated as, and in most cases more saturated than, the stimulus. An exception to the latter statement occurs in the case of the blue after-image for orange or yellow, when these two colors are seen as red on the white background. (The red is frequently more saturated than the blue.)

With the eye fully adapted to bright light, after-images were sometimes perceived even when the stimulus color itself was not distinguished. These after-images occurred almost exclusively when the observations were made on a white background in bright illumination. By bright illumination is meant the sort of light obtained.

as in the present experiment, from a large north window on a bright, clear day, in a room with white or gray walls. An essential condition for the after-image is that the campimeter screen be placed near enough to the window to get the full light, and not to be shadowed by the walls of the room. The results are so directly dependent on the illumination that it is necessary to work during the middle part even of bright days. These results seem to be merely another illustration of the correlation between the conditions of achromatic adaptation and the relative saturation and frequency of the after-image. They represent the typical results of one extreme of brightness adaptation, of which the opposite extreme is complete dark adaptation with its practical absence of after-images.

These after-images, which follow unperceived stimuli, occur when the local brightness conditions are such as to emphasize the color of the after-image more than that of the stimulus. For example, with the white background and white projection ground, an unperceived yellow is sometimes followed by a clear blue after-image, while under the same conditions an unperceived blue may give rise to a clear yellow after-image. In both of the cases just mentioned, the stimulus is relatively dark because of brightness contrast with the white background.

Both green and red after-images were obtained by projecting the after-images on the gray or black screen,[6] and so observing them under the local brightness conditions which most favor the perception of red and green.

The two conditions mentioned as necessary for observing these after-images can perhaps be brought together as follows: the white background drowns out the stimulus color by darkening it beyond the point at which it is seen as color: now if the after-image is projected on a screen which emphasizes the after-image color, the result is the perception of the after-image even when the stimulus color is not seen.

The failure of the after-image in dark-adaptation seems to be analogous to the effect produced on a color by darkening it by brightness contrast with a white background. In both cases the color processes are in some way inhibited, so that one part of what seems to be, under other conditions, a reversible reaction, is lacking. With our present knowledge of retinal processes, it seems impossible to decide just how the induced brightness or the brightness of the projection ground affects the color processes. However this may be, all our results point to a direct dependence of color processes on the

[6] For method of projecting the after-image on screens of different brightness values without changing the brightness of the general background, see *Psychological Review*, Vol. 15, pp. 27–29.

conditions of local and general achromatic adaptation, and to this *achromatic* rather than to *chromatic* adaptation as the explanation of this after-image, which Professor Titchener and Mr. Pyle have called the "paradoxical after-image."

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SOCIETIES

NINTH MEETING OF THE WESTERN PHILOSOPHICAL ASSOCIATION

REPORT OF THE SECRETARY

HISTORICALLY the meeting of the Western Philosophical Association in St. Louis, April 9 and 10, under the auspices of Washington University, was of unusual importance. For it was the semi-centennial of philosophy in the west, which claims St. Louis as its cradle. The smallness of the attendance was probably indicative of the Hegelian interest of to-day, as was the enthusiasm of those present an evidence of the permanent claims of Hegel. The numerous lunches and smokers provided by Washington University gave opportunity for more than usual discussion and fellowship among those present.

The announcement of the arrangement for publishing the larger logic of Hegel by the survivors of the St. Louis band formed a fitting testimony to the live character of the Hegelian spirit, and ought to be welcomed by students of philosophy.

The following officers were elected for the subsequent year: Professor Carl E. Seashore, University of Iowa, president; Professor G. A. Tawney, Cincinnati University, vice-president; Professor Bernard C. Ewer, Northwestern University, secretary and treasurer; with Professor A. O. Lovejoy, of the University of Missouri and Professor F. C. Sharp, of the University of Wisconsin, additional members of the executive committee.

The following members were elected: Mr. F. C. Becker, University of Illinois; Professor Bernard C. Ewer, Northwestern University; Professor C. E. Corey, Washington University; Professor Hartley Burr Alexander, University of Nebraska; Professor J. W. Hudson, University of Missouri; Professor Henry W. Wright, Lake Forest University, and Dr. Daniel A. Tear, Chicago. The following recommendations were passed: (1) That non-payment for three years shall automatically cancel membership; (2) that the time of the papers shall be printed in the program and that twenty minutes

shall be the maximum limit unless by vote of the executive committee; (3) that abstracts be submitted to the secretary previous to the meeting at which the paper is to be read; (4) that special sessions be held for the more technical papers in experimental psychology and philosophy respectively and that the president and vice-president represent both philosophy and psychology. The consideration of the standard of admission went over until the next meeting.

To indicate the literary activity as a result of the meetings of the Western Philosophical Association it is only necessary to point to the number of papers which have appeared in various journals from the program of 1908. The symposium on Meaning appeared in the *Psychological Review,* including papers on the "Nature of the Mental Image," by Stephen S. Colvin; "Image and Meaning," W. B. Pillsbury; "Meaning as Adjustment," T. L. Bolton; and "Meaning and Validity," by J. E. Boodin. The following papers have appeared in the JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS: "Ethical Value," James H. Tufts; "Religious Value," Gerge A. Coe; "Truth Value," A. W. Moore; "The Meaning of $\sqrt{-1}$," Alfred H. Lloyd; "Emphasis in Philosophy," G. R. Dodson; the "Concept of Unity," J. H. Farley; a "Genetic Study of Make-Believe," T. L. Bolton; the "Genetic Way of Defining Philosophy," G. A. Tawney. The paper by F. C. Sharp on the "Problem of Objectivity in Ethics" has appeared in the *Philosophical Review.* Other papers, including the "Philosophical Meaning of Neo-Vitalism," A. H. Daniels; "Esthetic Value," Max Meyer; "Realism and Truth," E. B. McGilvary; "The Intellectual Phases of Esthetic Experience," E. L. Norton—either have appeared in other form or will so appear in the near future.

The abstracts of papers from the last meeting follow:

Evolution and Metaphysics: the Obsolescence of the Eternal: A. O. LOVEJOY.

This paper dealt with the relativity of the eternal and was an argument for the temporal as the real. There are only two types of philosophy possible as regards the temporal—the type which regards the temporal as real and the type which regards the temporal as an illusion. The latter is most consistently stated in the Sankyah system. Bergson may be regarded as a representative of the temporal as real. Hegel, with his eternal system of categories must be regarded as belonging to the type which treats time as an illusion. But can a changing consciousness know the eternal? Even the eternal, from the temporal point of view, as McTaggart has shown, must be looked upon as a future limit or completion of time, assuming of course that the future is better than the past.

Realism and Idealism, a Discussion of Terms: J. E. BOODIN.

It was pointed out that realism and idealism could not be properly opposed as metaphysical theories, as realism historically is not necessarily materialistic, but more frequently idealistic or spiritualistic as regards stuff. Again, from the epistemological point of view, it is not possible to oppose realism and idealism. Realism, if it means anything, must mean that the reality which is known is independent, so far as its existence is concerned, of the finite meaning which knows it. But the classic idealistic systems, even that of Berkeley, admit that the finite cognitive meaning does not make the object exist. They are therefore realistic. It was proposed, therefore, that the term idealism should be restricted to its classical metaphysical use as opposed to materialism, while the proper opposite of realism, at least so far as we finites are concerned, is not idealism but solipsism. To this the association agreed, if silence gives consent.

An Interpretation of the St. Louis Philosophical Movement: G. R. DODSON.

Why did a number of men of ability find a gospel in Hegel at a time his philosophy was discredited in the land of its birth? One is a religious reason. There is a deep craving in most men for some view according to which our life can be regarded as something more than "a mere item in a natural world." Any philosophy which even promises this is sure to be welcomed. Hegel was welcomed because he enabled men to think nobly of themselves as united and cooperating with and sharing the life of reality. . . . Another reason was the constitutional yearning for a deductive ideal which some seem to have. This general or pure thought solution of the problems of life the leaders of the St. Louis movement thought they found in the Hegelian dialectic, and they proceeded to its application. . . . But the most important reason for the political and educational success of Hegelianism in the west is the conciliatory character of Hegelianism—its ability to meet opposing interests and reconcile them. In this the temperament and tact of the leaders no doubt played an important part. See this JOURNAL, Vol. VI., pp. 337–345, for the entire text.

The Ethical Significance of the Hegelian Dialectic: HENRY W. WRIGHT.

The Hegelian dialectic is essentially a law of spiritual development, illustrated in every complete volition. Its movement is that of self-realization and two views of hedonism and rationalism in ethics have arisen from an undue emphasis of the two extremes, thesis and antithesis, in this movement. The activity of impulse with its present satisfaction constitutes the thesis in self-realization.

The movement to antithesis occurs when this present impulse is denied in favor of some purpose or conception of reason whose fulfillment lies in the future. The final stage of synthesis is reached when the strength of present impulse is converted into a means to the attainment of the larger ends and ideals of reason.

Hegel's Conception of an Introduction to Philosophy: JAY WILLIAM HUDSON.

The "Phenomenology," intended at first by Hegel as an introduction to his system, definitely suggests an efficient way of introducing students to philosophy. Among the definite suggestions are: that, for the beginner, philosophy were better viewed not as a theory about life, but as an attitude toward life; that common sense means real attitudes not alien to philosophy, and so is responsible for maintaining itself; that thus the transition to philosophy is to be depicted as an inner development of these attitudes; that the best way to introduce to the typical philosophies is to depict them as emerging as the successively evolved attitudes of the individual toward his world; that it is these typical attitudes and not the concrete history of philosophies which the introducer is concerned in presenting. Hegel's procedure rightly introduces all philosophies as solutions of problems which have first been actively realized as such by the reader; he thus introduces not so much to a system as to a philosophic mode of mind, through spontaneous thinking; he strikingly and rightly conceives of the relation of an introduction to philosophy to literature and to concrete historic movements. Hegel's embodiment of his conception is hardly successful; but the conception itself is so commendable that a new experiment within the conception is highly worth while. See this JOURNAL, Vol. VI., 345 ff., for the full text of this paper.

Religious Implications of Contemporary Realism: BERNARD C. EWER.

Contemporary realism shows three types, the "new realism," "pragmatic realism" and "natural realism." All profess concern with facts rather than with any interpretation of facts which leaves their appearance somewhat distinct from their reality. The implications of these types for the philosophy of religion are conditioned upon (1) scientific psychology of religion, (2) theoretic provision for modern practical religion, (3) concepts of transcendence and immanence, and (4) continuity with the values of life as uncritically held by the religious mind. The new realism is properly naturalistic. Its highest religious concept is that of a system of moral relations as facts of human nature and society. Religion can not survive merely as poetry, consciously acknowledged as illusory. Pragmatic realism has important implications for religion, but is in danger of degrading

worship to the status of magic. It is, however, ordinarily tinctured with non-pragmatic assumptions. The recent history of the psychotherapeutic movement shows its value and its limitations. Natural realism is historically close to the religious mind, *e. g.*, in affording a theoretic basis for moral dualism, and in recognizing the volitional character of belief. It offers possible lines of progress for the philosophy of religion quite as promising as those of other types of realistic thought.

The Relation of Schiller to Post-Kantian Idealism: EMIL C. WILM.

Schiller's notion of the organization of the rational and the sensuous, the universal and the particular, which has in Schiller a merely psychological and ethical significance, is falsely construed by Hegel into a metaphysical theory of the identity of the ideal and the real. These moments are held in strict separation by Schiller, and Hegel's criticism of Kant, that the latter did not attain an objective formulation of the beautiful because he did not transcend the opposition between subjective thought and objective reality, applies to Schiller as fully as it does to Kant. Schiller, both in his earlier philosophical period and at the height of his speculative activity, never abandoned the presupposition of an extra-mental object, the material of sense experience, and the condition of thought and will.

Some Features of the Social Aspects of Hegelianism: J. H. TUFTS.

Hobhouse charges idealism with being one of the factors in the reaction against democracy. Idealism, especially in its Hegelian form, undoubtedly emphasizes the "universal" aspects of man which emerge in organized society, as over against individual interests and the immediate personal liberties which were emphasized by the older liberalism and what Hobhouse calls the "plain, human, rationalistic way of thinking." It was this very fact which appealed to the founders of the *Journal of Speculative Philosophy* which began publication just after the new emphasis upon national life at the close of the Civil War. Hegel conceived the state largely in legal and military categories. Modern progress in science and education lead us to conceive human unity as mediated more through other agencies. The new industrial, sanitary, social, and educational problems make the function of the expert, rather than the monarch, increasingly important as an agent of the commonwealth. The question how far Hegel had a glimpse of scientific method as a possible method of social progress, and how far he conceived "passion" to be the moving power, not only in past history, but necessarily, is bound up with the whole question of the relation between his logic and his view of history.

The Religious Trend of Hegelianism: W. M. BRYANT.

In Germany a note was long since made to the following effect: The fundamental principle of Hegelianism—namely: that everything tends inherently to go over into and become its own opposite—has been beautifully illustrated in the history of Hegelianism itself. And there seems to be some truth in this. Wherever Hegelomania has died out it appears invariably to have been reborn as—at least there has appeared in place of it—Hegelophobia.

Now the Hegelianism referred to in the present brief paper is—permit me to urge—neither of these. Hegelianism as here intended is, first of all, a philosophic method; which, secondly, involves a very pronounced religious attitude. As method, its immediate presupposition is: that the one thing directly knowable by thought is just thought itself. Along with which is the fundamental conception that in its very nature mind is characterized by spontaneity. And this comports exactly with—is in fact the complement of—the dogma expressed in the laws of motion, namely: that matter as such is absolutely destitute of any and all principle or power of initiative. Not only is it, then, that "Mind governs the world" (as "Old Nous" of Athens used to say); but also that, primarily, mind *is* the "world" and, secondarily, *produces* the "world."

Mind, as self-active, is self-manifesting, self-expressive, self-revealing. Man speaks, and words are; God speaks, and worlds are. And, for our present purpose, the world in space is merely the medium of communication between man as mind and God as mind.

Note now that (as here understood) Hegelianism insists uncompromisingly upon this: That human history is an evolutional process. It is "progress in the consciousness of freedom"—progress, that is, in self-comprehension by man; the progressive discovery on his part that, as mind, his nature is one with the nature of God; progress practically, therefore, is that "imitation of God" which the "Second Founder of Christianity," by one of his characteristic intuitions, recognized as the one really worthy motive of all human effort.

But Hegelianism views the process of human history as merely the culminating aspect of one all-inclusive dialectical movement, any given instance of actual development within which must (ideally) begin with the simplest degree, and proceed with logical consistency through each and every succeeding stage to the ultimate goal for that special type of existence. Meanwhile Hegelianism—a really modest Hegelian (if anywhere there is one) will admit that—Hegelianism itself is but one of the many aspects of the evolution of human consciousness. And, to insist that, in its applications of its own dialectic method within the sphere of human progress, religious or other,

Hegelianism has made no mistakes—that would be in direct contradiction of the fundamental trend of Hegelianism itself—would in fact be nothing less than a manifestation of Hegelomania. Recall in such applications the often criticised insufficient allowance for human caprice—the violent exercise, that is, of undisciplined human freedom—and the consequent forcing of facts, betimes, into the too rigid (or rather, for such purpose, the far too simple) framework of the extremely abstract "Dialectic" as set forth in the Hegelian logic.

Consider the fundamental religious trend, however. On his part, Hegel, in his "Philosophy of Religion," represents the whole course of the development of the religious consciousness of the human race as logically one, the culminating degree of which is found in Christianity. So again F. C. Baur and others—the "Tübingen school"—sought, with all the resources of learning at their disposal, to penetrate to the actual facts of the Christian religion itself and thus to atttain a deeper and worthier comprehension of its actual import.

Discredited no doubt much of that work has long since come to be; but this rather in the details of its learning and in the overemphasis of some of its features than in the validity of its general trend. Renovated, corrected, supplemented through the researches of Pfleiderer and others, this movement has faced steadily in the direction of that "higher criticism" to which we of to-day owe so much in the field of direct historical knowledge of actual religious development.

True, there are those who believe—with more or less of reason—that rigidly verified historical fact is precisely that with which "Hegelianism" is least of all concerned. But the charitable—not to say super-charitable—attitude of present-day philosophers may perhaps be trusted to allow that, along with other "isms," even Hegelianism may sometimes do better things than it has directly intended. I mean, just now, that its deepest intuitions have all along really faced in the direction indicated. Possibly it may not be a serious overstrain of the charitable spirit referred to if it is claimed that those far-reaching intuitions have from the outset been—consciously or unconsciously—actual working factors in the fundamental motive and even in method, leading to the great scientific results already attained in the sphere of religious interpretations.

Repeat now that the world as a rational whole—Heraclitus, you remember, believed it to be so—is by that fact for us an actual revelation. In the latest edition of his psychology Jodl reminds us that "the way of science proceeds from chaos to cosmos." Doubtless we had a suspicion of that before. Nevertheless, it does us no harm to be reminded of it again. In fact, the way of science is the way

of ordered thinking; the way leading from the incoherence of elementary consciousness to the coherence, the (at least relatively) cosmic character of matured consciousness. And, of course, in its larger application this is the way from the naïve habit of mind of primitive man to the self-verifying habit of mind in its present-day maturity. In a word, it is the way of progressive self-adjustment on the part of man as mind to the always perfect method of mind eternal. And, in that sense, we may declare the way of science, as Hegel declared philosophy in general, to be "a perpetual service of God."

Chaos, then, is not some past stage of the universe. It is a past —if only it *is* past—stage of my individual consciousness; and the religious aspect of my individual intellectual life consists in the increasing degree of actual appreciation, along with increasing degree of comprehension, on my part, of the perfect method of the mind eternally manifest in the universe as a whole.

Seize that method and you will seize the eternal "Logic"—the method, that is, of the eternally living *Logos*. Seize any other "method" and you will sooner or later find yourself making use of some evanescent form of illogicality—only to see it presently passing over "into its own opposite."

Of course these conceptions are not to be too specifically labeled. They belong to the history of philosophy. And to indicate this I have mentioned at random names so far apart as Heraclitus and Jodl. What gives its peculiar religious trend to Hegelianism is, to repeat, the thorough-going seriousness with which it holds fast to the absolute reality, the primal, essential spontaneity of mind. That, as it ever insists, is the permanent fact. All else is but passing expression. And here again the difference is, after all, more a matter of emphasis than of originality.

Now this peculiar trend has been, and (however masked) still is, a really vital factor in the working out of a more clearly defined religious consciousness on the part at least of educated people. On the one hand is the permanent truth of religion. On the other is the shifting myth-form. And precisely by emphasizing this distinction the way is prepared for that further advance in religious consciousness by which the shifting myth-form can be given up without loss of conviction as to the essential truths involved in the religious interests of life. In a word—speaking for Hegelianism as I understand it—it is through reasoned insistence upon the veritable, essential reality of the spiritual life that religious conviction is not merely preserved for the educated mind, but also intensified and enriched.

Concerning the actual work in progress to-day within the field of religious history: On the one hand, the searching interpretative and verifying work of Pfleiderer, Wernle, and Harnack—to mention only the most conspicuous names—into the origins and actual first shapings of Christianity. On the other hand, the work of such investigators as Boissier, Frazer, and Rohde, tracing out the elements, forms and processes of that great pagan revival which took place at the same time with the early evolution of Christianity and for a time in fact proved to be its really formidable rival. A marvelously creative age! Throughout the then civilized world a profound religious awakening. Two vast parallel movements, the one Jewish in origin, the other Hellenistic, each deeply influencing the other. It is the reverent spirit of inquiry of the present day that is winnowing the records of that great formative period within the sphere of religious history and is bringing to light the historic facts of which philosophy must once more seek to estimate the deeper values for the religious consciousness. In all which work of research the deeply religious trend of Hegelianism is, directly or indirectly, traceable; as, in the further work of estimating the values of the new results attained in the field of fact, the spirit of the Hegelian dialectic—here happily freed from its stiffly formal aspect—can hardly fail to prove the leading factor—"Hegelian," that is, of course, only in the sense in which the law of gravity is "Newtonian."

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REVIEWS AND ABSTRACTS OF LITERATURE

Is Immortality Desirable? G. Lowes Dickinson. Boston and New York: Houghton Mifflin Company. Pp. 63.

Although the body of this address is devoted to the question stated in the title, the beginning and the end consider instead whether immortality is possible or probable. The variation in subject is not unimportant; for Mr. Dickinson, being preoccupied with the poor sorts of immortality which are empirically plausible, or for which some evidence might be procurable, has not given free rein to his fancy in depicting that sort of immortality which would be desirable. Such an ideal picture, however, if not meant to deceive, would be apt to instruct. It might prove helpful in the solution of the other question, as to the truth of immortality, for it might dissuade us from twisting reality to suit our rash fancies, seeing how far reality actually responded to our rational ideals. As it is, among the most persuasive passages in this discourse are those which disparage immortality of various undesirable or dubious kinds, such as arrested youth, endless old age, perpetual recurrence of an imperfect life, or heaven

on condition that others should be enduring hell. There is, however, a profound will or implicit ideal in us which earthly life can hardly satisfy; and what would render immortality desirable would be the possibility of attaining this ideal in some later life. To this end, Mr. Dickinson continues, it would be perhaps enough that an unconscious moral mechanism should secure an appropriate sequel to all actions, a sort of Karma that should explain our fortunes in the world and preserve our acquisitions. But it would be decidedly better if a conscious, even if partial, memory connected these successive existences, as it does the episodes of our existence here. To deny this, Mr. Dickinson tells us, "does not empty life of all its worth, but it destroys, in my judgment, its most precious element, that which transfigures all the rest; it obliterates the gleam on the snow, the planet in the east; it shuts off the great adventure, the adventure beyond death" (p. 33). Such an immortality being highly desirable, it is very important to know whether it exists or not; and we may hope to discover that it actually does exist, if we encourage and follow earnestly the investigations of the Society for Psychical Research.

This conclusion, after Mr. Dickinson's restrained and exquisite presentation of the other points, will cast a chill upon the reader, as it visibly did upon the audience to which this lecture was originally addressed. The author, with Mr. Schiller, admits sadly that people are not interested in psychical research, nor in the immortality it hopes to discover; and he seems to attribute this general indifference to spiritual sloth, prejudice, and lack of imagination. It may be worth while for me, speaking entirely for myself, to point out some other things that contribute to that feeling.

In the first place, I am not sure that the adepts of psychical research are conspicuous for that "scientific method and critical faculty" which Mr. Dickinson, without a smile, attributes to them. I make no pretensions to be scientific myself; yet I think I see the difference between science and mythology. There are doubtless currents in nature to which supersensitive persons respond; to study them might throw unexpected light on the relation of mind and body, on memory, on intercommunication, and even perhaps, on the nature of time. Yet wireless telegraphy seems to promise more in these directions than psychical research. As the latter is now pursued, it seems to be less interested in bridging phenomena with other phenomena than in attributing them all to a mythical cause. Would it be a proof of scientific method and critical faculty if some one tried to find free-will in the brain, or Apollo in the responses at Delphi? A "spirit" or "person," such as is alleged to send messages from the other world, is a concretion in discourse, a moral or rhetorical entity, a term that may be conveniently used to cover a certain cycle of phenomena, but which, taken in itself, is a word only, and a mere label for our ignorance. A "mind," in another world as in this, is undiscoverable save through its manifestations. Science consists in recording these, and tracing their empirical connections; it would stop, in the case of free-will, at some material break in causality; in the case of Apollo,

at the sun or the priestess or some impressionable ether vibrating between them; and in the case of messages from the dead, at some "astral body" flitting about materially. Mr. Dickinson (p. 53) accuses Professor Münsterberg of being dogmatic and unscientific when he asserts that there can be no sensation in the mind when the body does not operate. The assertion is no doubt dogmatic in form and not qualified by the proviso, which I suppose is understood, that we are speaking of sensations that may be inferred systematically and known from without to exist, and not of such as might exist for themselves in isolation, without a discoverable basis or occasion in nature. The conditions of human knowledge have no authority to limit the possibilities of being; but science can not discover anything which, by definition, is undiscoverable. This insight may be expressed dogmatically, yet it is the essence of a "critical" philosophy. Science can only collect the phenomena upon which imagination, if it likes, may build a mythology.

In the next place, the actual communications of mediums, if we choose to interpret them mythically, suggest an immortality which is distinctly undesirable. It is that same ghostly, dismal, and helpless sort of survival which primitive men have always believed in. It is not so much another life, as a prolonged death-rattle and delirium. It makes us shudder "lest death should be," as Shelley says, "like life and fear, a dark reality." A legitimate inference, however, from this shadowy character of the supposed spirits is that they are really echoes only, not existences collateral with that of living men.

Even supposing, however, that further investigation should make it appear that this survival is genuine and sometimes happy, it by no means follows, as Mr. Dickinson seems to assume, that it is important for us now to ruminate over that future existence, or even to know that it awaits us. A future may be as important as you choose taken in itself, and when it arrives; but foreknowledge of it is important only when useful in modelling that future or in heightening, by anticipation, the value of the present. Such foreknowledge as theosophical prophets have reached, or are likely to reach, does not fulfil these conditions. The question whether one is to marry, and whether that marriage is to be happy, is not unimportant for the individual, and is a matter far more open to calculation and prearrangement than is life in another world; yet what could be more idle, or more illiberal, than to spend one's boyhood pining for wedded bliss and consulting fortune-tellers, on the ground that, unless that happy future were foreknown and secure, football and friendship would lose their "most precious element"? As Mr. Dickinson prefers poetry to reasoning on this subject (and I agree with him), I will quote a few lines from Goethe, who believed himself too good for extinction and thought the spirit might pass through death into a fresh and adventurous existence, like a seed that sleeps through the winter. Yet he says ("Faust," Part II., Act. V., Scene 4):

Nach drüben ist die Aussicht uns verrannt;
Tor, wer dorthin die Augen blinzelud richtet,
Sich über Wolken seinesgleichen dichtet!
Er stehe fest und sehe hier sich um:
Dem Tüchtigen ist diese Welt nicht stumm.
Was braucht er in die Ewigkeit zu schweifen?
Was er erkennt lässt sich ergreifen.
Er wandle so den Erdentag entlang;
Wenn Geister spuken, geh' er seinen Gang.

Furthermore, if retribution is unjust, as the author admits, how can justice be furthered by a man's perpetually inheriting the influence of his past acts and habits? What conduces to justice, I should think, is that, wherever action is likely to have important consequences for others, that fact should be regarded in action; not at all that, some good or evil state being given, it should have had kindred causes, or should have kindred effects. The bonds of such moral fatality, which seem to Mr. Dickinson essential to the preciousness of life, seem to me incompatible with the freedom and intrinsic joy of it. I can not see how the whole of an infinite life should be valuable when every part of it is blighted and oppressed by infinite forgotten guilt and an infinite incalculable responsibility. It is only by ignoring their immortality that those who believe in it are able to live.

On the other hand (and this is my last observation), the ideal I find implied in our instincts, preferences, and hopes is a natural, earthly, and distinctly human ideal. If it seems otherwise sometimes, that is only because it has been crushed by misfortune, in the absence of articulate art, into something utterly vague and wistful. Specify your aspirations, begin to enact them, and you will perceive that they are human and that their fulfilment can come only on earth. At the same time you will perceive that they are not selfish. The precious being which you crave to preserve is essentially an ideal, not expressible save in a flux of existences. Therefore sleep and oblivescence need not destroy it. It dwells in consecutiveness of purpose, unanimity of thought, kinship in happiness; it desires to triumph over death only as memory, heredity, and culture triumph over that mutability which, in material life, is absolutely pervasive and irrevocable. There is no ideal self so private as not to be made up of these public elements. The chimera of a soul which is neither the life of the body, nor a rational object, and yet is both at once, is one of the metaphysical hybrids generated by giving a physical status to a moral entity. Such confusions are prevalent enough and traditional; yet they hardly avail to mislead instinct; and this is the fundamental reason, I imagine, why a mythical immortality, even when believed in, leaves mankind in such invincible apathy. They know it is not what their hearts aspire to; it is not really their good, much less a condition for the excellence of the universe. They are not conceited enough to believe that no one can take their place upon the world's stage to the common advantage. If I were the playwright, I confess I should hope soon to find or produce a better set of characters than any that have yet

appeared. Not a single man or woman has ever existed whom I should wish to engage to play forever, rather than fill my theater from age to age with fresh faces, and new accents of nature. Continual perfection would be my ideal, not individual perpetuity; for such perpetuity, as an ideal, would imply either that perfection was unattainable or that the possible forms of it were exhausted. To the sorts of immortality, accordingly, which on closer inspection disenchant us and prove to be undesirable, I should add the finding of my own person again beyond the grave, together with the persons of all my earthly acquaintance, a prospect which leaves me cold or, rather, freezes me to the marrow. To read in such a sense the ideal of human nature, which after all *is* directed upon the ideal, seems to me far from penetrating and far from sublime.

G. SANTAYANA.

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The Riddle of Personality. H. ADDINGTON BRUCE. New York: Moffat, Yard, and Co. 1908. Pp. xiii + 247.

This book, dedicated to William James and Boris Sidis, is a brief, popular presentation of the achievements of the psycopathologists and the psychical researchers. The author aims to correlate and unify the two sets of investigations in the light of Myers's theory of the subliminal self.

The first chapter is devoted to a sketch of the development of spiritism from the Fox sisters to Mrs. Piper, and to a more interesting account of the work of the early hypnotists—Mesmer, Bertrand, Esdaile, Elliotson ("to whom belongs the distinction of having made mesmerism popular in England as a curative instrument"), and Braid, "who was the first really scientific student of mesmerism."

In the second chapter, the author, after telling of the founding of the Society for Psychical Research, recounts several of the classic cases of multiple personality, and concludes with a short statement of Myers's theory of a subliminal self. As it is this theory, in conjunction with telepathy, which constitutes the author's basis for interpreting "psychic phenomena," it is to be regretted that more pains are not taken to defend it from well-known objections. For example, when considering the objection that the phenomena attributed to a subliminal consciousness may be more simply explained as due to cerebral activities not correlated with any consciousness at all, we find by way of answer only the following: "Satisfactory as this objection may seem to him who makes it, he completely overlooks the fact that it takes no account of the psychical significance of the phenomena involved; that, in other words, while the problem of causation may be quite correctly given a physiological explanation, the deeper problem of why the resultant changes take the particular forms they manifest remains untouched" (p. 49). One is tempted to reply that if the structure of the nervous system is adequate to determine the existence of the phenomena, it is of necessity capable of determining also their special character. Again, in citing alleged cases of telepathy in support of the existence of the subliminal, Mr. Bruce seems not to realize that even if we accept these cases at their face value,

they need indicate no more than an unknown type of physical communication between brain and brain. Finally, supposing the subliminal consciousness to have been proved to exist, there is no reason why it should enjoy immortality; or why it should possess any greater measure of independence in its relation to the total nervous system than that possessed by our normal consciousness in its relation to such portion of the nervous system as may condition it.

Chapter III. deals with the different theories of hypotism and with the therapeutic work of the French psychopathologists.

Chapter IV. contains a sympathetic account of what has been done by Drs. Sidis and Prince, and a criticism of American neurologists for failing to realize the importance of combatting the increase of nervous diseases in America by a more systematic and extensive use of suggestive therapeutics. The present invasion of this field by the clergy might have been plausibly explained as a result of its relative neglect by our physicians.

The remaining chapters and three of the six appendices are, for the most part, taken up with a careful examination of the evidence offered by the Society for Psychical Research in proof of survival of death. The author's conclusion is that immortality is still unproven, and that telepathy is both a necessary and an adequate explanation of the phenomena adduced.

Mr. Bruce's book is well written and very interesting. It may be recommended to all who desire a popular introduction to the subjects of which it treats.

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The Origins of Leadership. EBEN MUMFORD. Chicago. 1909. Pp. 87.

This doctor's dissertation, previously printed as a series of articles in the *American Journal of Sociology* for 1906–1907, studies leadership as a social phenomenon. Its eighty-seven pages can not be accounted a very weighty contribution to the subject. Mr. Mumford quite neglects such previous investigations as those of Herbert Spencer and J. G. Frazer. More than a third of his space is given over to a discussion of leadership "as an innate and acquired modal societary tendency or force," of its relation "to the organized and organizing phases of the social process," and of its aspects from "the genetic point of view." The author's treatment of these difficult themes is well reasoned, but in the present state of sociological analysis certainly premature.

The student will turn with greater satisfaction to the study of the actual conditions of leadership among existing primitive folk. Mr. Mumford has here broken fresh ground in showing how the conditions of life in various hunting groups have influenced the development of personality and authority. This idea is worked out with special reference to Australian and North American tribes. It is to be regretted that the treatment was not more thoroughgoing; the citation of a baker's dozen of anthropological books and articles scarcely affords a very secure

foundation for wide generalizations. Nevertheless, the author has made a useful preliminary study which might easily be expanded into a much-needed monograph on leadership in primitive society.

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JOURNALS AND NEW BOOKS

ANNALEN DER NATURPHILOSOPHIE. Band VIII., Hefte 1 & 2. *Psychographische Studien. III. Michael Faraday* (pp. 1–52): W. OSTWALD. – An account of Faraday's life, with a description of his more obvious and well-known characteristics, but with little attempt at analysis. *Über das Grundgesetz der neuen und alten Ethik* (pp. 53–57): J. ZMAVC. – The true principle of industrial society, render service equal to service received, is the modern counterpart of Christ's two commandments, Love God, and thy neighbor as thyself. *Das Wesen der Mathematik* (pp. 58–62): J. BAUMANN – A criticism of Voos, who would place mathematics as a theory of numbers on a purely conceptual basis. *Alltäglicher Schnitzer in der praktischen Logik* (pp. 63–81): A. MAYER. – Nine classes of common fallacy well illustrated and analyzed. *Die Motive des Handelns* (pp. 82–94): W. FULDA. – A scheme of twelve fundamental concepts, in four series, each progressing from a condition of mere adjustment through a compromise stage to the condition of culture. *Die Ablehnung der Materialismus-hypothese durch heutige Physik* (pp. 95–130): H. WITTE. – Materialism is defined as the belief that what exists is "*Stoff*," which maintains or changes its place in space. Biological materialism is reduced to physical, and the latter is shown to be based on a theory of ether, continuous or discontinuous. But an analysis of mechanical theories shows them all to be inconsistent with the existence of ether. *Die Monismusfrage in der Physik* (pp. 131–136): H. WITTE. – The monistic explanation of nature will result not from basing electrodynamics on mechanics, but *vice versa*. *Bemerkungen über Ethik und Pedagogik* (pp. 137–152): O. NAGEL. – Evolutionary energetics harmonized with the ethical position of Christ and Dante; with pedagogical applications. *Das Ende vom Lied* (pp. 153–174): H. LOWY. – The number of possible melodies is finite—about the thirty-third power of ten. But the number of non-melodic compositions possible and probable is not easy to compute. *Persönliche Errinerungen an Hermann Lotze* (pp. 175–182): J. BAUMANN. – *Über Korrelationen von Unterschieden bei Organismen* (pp. 183–199): K. HOFFMANN, JUNR. – An attempt to formulate mathematically the degree of relationship between organisms. *Synthese der Empfindungen* (pp. 200–213): R. SELIGMAN. – The assumption (Mach, Democritus) of separate elements of sensation leads logically to a stupefying subjectivism; subjective feeling and spatial perception alike rise from a basis of touch sensation. *Mathematische Beschreibung chemischer Vorgänge* (pp. 214–265): F. WALD. – An attempt to formulate the

spatial and numerical conditions of all possible chemical phenomena. *Das System der Wissenschaften* (pp. 266–272): W. OSTWALD. – The sciences grouped under the fundamental sciences of order, the physical sciences of energy, and the biological sciences of life.

REVUE PHILOSOPHIQUE. May, 1909. *La mémoire affective et l'art* (pp. 449–460): J. M. BALDWIN. – Certain points concerning affective memory, its content, genesis, and characteristics, are brought together from the third volume of the author's Genetic Logic. *Vers le positivisme absolu* (pp. 461–479): A. REY. – Philosophy ought to be nothing but the science of its epoch. Present-day philosophers who strive for a metaphysics apart from science are Preraphaelites in philosophy. *Beauté naturelle et beauté artificielle* (pp. 480–518): CH. LALO. – The beautiful is not merely a typical instance of a species. Its esthetic character comes from the activity or technique involved in its creation and nature is only beautiful esthetically in so far as it contains an art. *Observations et discussions. Le retour éternal: Nietzsche et Lange:* A. FOUILLÉE. *Sur la durée des faits psychiques:* G.-L. DUPRAT. *Analyses et comptes rendus.* H. de Vries, *Espèces et variétés:* LE DANTEC. Bieganski, *Medizinische Logik:* DR. S. JANKELEVITCH. Newton Scott, *The Genesis of Speech:* B. BOURDON. A. Pick, *Über das Sprachverstandniss:* B. BOURDON. Bühler, *Uber das Sprachverstandniss vom Standpunkt der normale Psychologie:* B. BOURDON. E. de Roberty, *Sociologie de l'action:* G.-L. DUPRAT. G. de Greef, *Précis de sociologie:* DR. S. JANKELEVITCH. P. Lafarque, *Le déterminisme économique de Karl Marx:* AD. LAUDRY. E. Picard, *Le droit pur:* J. LAGORGETTE. L. Duguit, *Le droit sociale, le droit individuel et la transformation de l'état:* I. LAGARGETTE.

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Titchener, Edward Bradford. *"A Text-Book of Psychology."* New York: The Macmillan Co. 1909. Pp. xvi + 311. $1.30 *net.*

NOTES AND NEWS

THE second decennial celebration of the opening of Clark University will be held at the university, Worcester, Massachusetts, during the week of September 6–11. The university purposes "to emphasize again the ideal of scientific activity to which the university has from the first been devoted," and has invited several distinguished scientists to lecture at the university during this week. Professor E. B. Titchener, of Cornell University; Professor Franz Boas, of Columbia University; Professor H. S. Jennings, of Johns Hopkins University, and Dr. Adolf Meyer, of the New York Pathological Institute, will represent the activity in experimental and comparative psychology in America; while Professor L. William Stern, of the University of Breslau, Managing Director of the Institute of Applied Psychology in Berlin, and Clara Stern, an investigator in the field of individual psychology and the psychology of testimony, will represent the progress in psychology in Germany. The university plans also to hold during this week of the celebration conferences on teaching of the different branches of science. Two of the psychological conferences will consider the teaching of psychology as a professional subject in normal schools and teachers colleges. The consideration will be under the direction of Professor Guy M. Whipple, of Cornell University, and Professor Carl E. Seashore, of the University of Iowa.

THE Sixth International Congress of Psychology will be held at the University of Geneva during the week of August 3–7. In order to facilitate discussion, the committee on organization has arranged a limited number of topics, which are to be introduced by speakers chosen in advance. The following are some of the topics scheduled for discussion: "The Psychology of Religious Phenomena"; speakers: Harold Höffding, of the University of Copenhagen; J. Leuba, of Bryn Mawr College; "Psycho-pedagogical Classification of Backward Students": speakers: Dr. O. Decroly, of Brussels; Professor G. C. Ferrari, of Bologne, Italy; Dr. Th. Heller, of Vienna; Professor L. Witmer, of the University of Pennsylvania; "Tropisms": speakers: Dr. G. Bohn, of the University of Paris; Professor Fr. Darwin, of the University of Cambridge; H. S. Jennings, of Johns Hopkins University, and J. Loeb, of the University of California. American psychology is to be represented in the individual discussions by Professor M. Meyer, of Columbia University; Professor J. Leuba, of Bryn Mawr College; Professor R. M. Ogden, of the University of Tennessee; Professor J. W. Riley, of Vassar College, and Professor R. M. Yerkes, of Harvard University.

A MEETING of the Aristotelian Society was held on June 7. The vice-president, Mr. G. E. Moore, was in the chair. Dr. A. Wolf read a paper on "Natural Realism and Present Tendencies in Philosophy." We quote in part the abstract of the paper given in the *Athenæum* for June 12: "Under the influence of Kant's criticism and Comte's positivism modern science has been drifting towards an exaggerated phenomenalism and an increasing distrust in human knowledge, until the theoretical construc-

tions of science have come to be described by its students as little more than a mirage. In the pragmatist conception of truth we see this tendency seeking an academic epistemology. But this more or less agnostic or sceptical tendency is beginning to arouse dissatisfaction, and there are signs of a forward move toward a new realism. The new movement is not without its excesses. Natural realism, with some little modification, is more defensible than is commonly supposed, and avoids the excesses of phenomenalism on the one hand, and of the new realism on the other."

ANNOUNCEMENT is made of the death of Professor Simon Newcomb, the noted astronomer and mathematician. Professor Newcomb was during his long life of service connected with the United States Navy, as senior professor of mathematics, and as superintendent of the Nautical Almanac Office; with Johns Hopkins University, as professor of mathematics and astronomy; and with Columbia University, as professor of astronomy. He was also instrumental in the preparation of the equipment at the installation of Lick Observatory in California. The list of Professor Newcomb's writings includes not only many astronomical and mathematical treatises, but also books and essays on finance and political economy. One of his latest essays is on the subject of aeronautics. Professor Newcomb was, in 1877, the president of the American Association for the Advancement of Science, and the vice-president of that association from 1883–89. He was also the first president of the American Society for Psychical Research.

FROM June 22 to June 25 Cambridge University celebrated the one-hundredth anniversary of the birth of Charles Darwin. Two hundred and thirty-five universities, academies, and learned bodies sent delegates to the University of Cambridge to represent them in this centenary. Among the delegates upon whom the degree of Doctor of Science was conferred by the University of Cambridge were the following: Harold Höffding, professor of philosophy at Copenhagen, Hugo de Vries, professor of botany at Amsterdam, Charles D. Walcott, secretary of the Smithsonian Institute at Washington, and E. B. Wilson, professor of zoology in Columbia University.

"A TEXT-BOOK of Psychology" by Professor Edward Bradford Titchener, of Cornell University, is announced in the book-notices of this issue of the JOURNAL. Professor Titchener, in the preface of the book, explains the purpose of the present volume. We quote in part his statement there. "The present work has been written to take the place of my 'Outline of Psychology.' This Part I. contains approximately half of the new work; Part II. will appear, I hope, in 1910. In the meantime, the last edition of the 'Outline' will be kept from the market; as soon as the text-book is complete, it will be withdrawn."

DR. E. F. NICHOLS, the president-elect of Dartmouth College, has received from Colgate University the degree of Doctor of Laws. Dr. Nichols has been professor in experimental physics in Columbia University since 1903.